

REMARKS

Claims 1-3 and 6-75 are all the claims pending in the application. Claims 4 and 5 are canceled. Claim 76 was previously canceled.

Reconsideration and review of the claims on the merits are respectfully requested.

Formal Matters

Applicants appreciate that, on the Office Action Summary sheet, the Examiner has acknowledged Applicants' claim for foreign priority and receipt of a certified copy of the priority document.

Applicants also appreciate that the drawings filed on August 1, 2001, have been accepted by the Examiner.

Specification

The Examiner objects to the specification because page 64, lines 5-9, contains shading.

Applicants provide a duplicate sheet of the specification to the Examiner with the shading removed in order to overcome the Examiner's objection.

Claim Rejections - 35 U.S.C. § 112

Claims 2, 3, 5, 7, 9, 11, 13, 17, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, 52, 55, 58, 61, 64 and 66-75 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

A. More specifically, the Examiner asserts that the phrase "and the like" renders Claims 2, 3, 5, 7, 9, 11, 13, 17, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, 52, 55, 58, 61, 64 and

66-75 indefinite. The Examiner is unclear as to what criteria the phrase "and the like" is measured, asserting that the metes and bounds of the scope of the phrase is unclear.

Applicants traverse that the phrase "a substance derived from a living organism and whose sequence, base length, composition and the like are known" first found in Claim 2 is clear to one of ordinary skill in the art as further encompassing characteristics of a particular substance, and therefore, the metes and bounds of the scope of the phrase is clear.

B. The Examiner asserts that the phrase "labeled with at least one kind of labeling substance" renders Claims 2, 3, 5, 7, 9, 11, 13, 17, 19, 22, 25, 28, 31, 34, 37, 40, 43, 46, 49, 52, 55, 58, 61, 64 and 66-75 indefinite. The Examiner is unclear as to whether the specific binding substance is separately labeled or through binding labeled with the labeling substance of the absorptive region.

Applicants traverse that the phrase first found in Claim 2 of "a plurality of absorptive regions being selectively *labeled with at least one kind of labeling substance*...and specifically binding a substance derived from a living organism and *labeled with at least one kind of said labeling substance* with the specific binding substances" (emphasis added) is clear from the support found in the specification, for example, at pages 2-3. The specification recites that "specifically binding the spot-like specific binding substances with a substance derived from a living organism labeled with a radioactive substance to selectively label the spot-like specific binding substances with the radioactive substance, thereby obtaining a biochemical analysis unit...". From the recitation in the specification and from Claim 2, it is clear that the specific

binding substance is NOT separately labeled but through binding, indirectly labeled with the labeling substance of a living organism.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

Claim Rejections - 35 U.S.C. § 102/103

Claims 1, 2, 3, 6-11, 14-20, 57-65 and 70-75 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Potter et al (U.S. Patent 5,837,194) for the reasons given in the Office Action;

Claims 1-13, 18, 19, 21, 22, 24, 25, 27, 28, 30, 31, 36, 37, 45, 46, 48, 49, 51, 52, 54 and 55 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Pham et al (U.S. Patent 6,426,050) for the reasons given in the Office Action.

Claims 1, 2, 3, 8, 9, 18, 19, 21, 22, 70-72, 74 and 75 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Vuong (U.S. Patent 6,448,089) for the reasons given in the Office Action;

Claims 33, 34, 39, 40, 42 and 43 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pham et al. for the reasons given in the Office Action;

Claims 45-53, 55 and 56 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Potter et al in view of Warner et al (U.S. Patent 4,728,792) for the reasons given in the Office Action;

Claims 66-69 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Potter et al, in view of Ogura (U.S. Patent 6,130,440) for the reasons given in the Office Action; and

Claims 23, 26, 29, 32, 35, 38, 41 and 44 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Potter et al in view of Pham et al for the reasons given in the Office Action.

Applicants respond as follows.

Potter discloses a method for analyzing dot blots in a manner of an M x N array each formed by dropping 5 μ L of a DNA solution, and chemiluminescent assay and radioisotopic assay are detected.

However, since a perforated plate made of nylon is used in Potter and a dropped solution has to be spread on the plate, spots cannot be formed at a high density.

On the contrary, in the claimed invention defined in amended Claims 1 and 2, since a specimen solution is dropped in a plurality of holes formed in the substrate made of a material capable of attenuating radiation energy and/or light energy, the dropped solution cannot be prevented from being spread on the substrate, and, therefore, spots can be formed at a high density of 200 to 300 μ m.

Furthermore, Potter neither discloses nor suggests a substrate made of a material capable of attenuating radiation energy and/or light energy and formed with a plurality of holes in which absorptive regions are formed by charging an absorptive material therein. Therefore, it is

impossible in Potter to prevent chemiluminescent emission released from neighboring spots from being mixed.

In Pham, a high transmittance portion is provided at the bottom of a well, but the high transmittance portion is not formed in the well, and neighboring wells are not separated by a portion made of a material capable of attenuating radiation energy and/or light energy.

Therefore, in the case of forming wells at a high density, since it is extremely difficult to prevent light released from the high transmittance portions of neighboring wells, wells cannot be formed at a high density.

On the contrary, in the claimed invention defined in amended Claims 1 and 2, since absorptive regions are formed by charging an absorptive material in a plurality of holes formed in a substrate made of a material capable of attenuating radiation energy and/or light energy, it effectively prevents radiation or light released from neighboring absorptive regions from being mixed even if the absorptive regions are formed at a high density.

Warner discloses a sorption sheet provided with barriers made of a material capable of attenuating a photon and/or beta particles. However, since the sorption sheet of Warner is made of glass fiber, nylon, nitrocellulose or other polymers and each barrier is merely formed so as to extend through the thickness of the sheet, it is extremely difficult in Warner to sufficiently and effectively prevent a photon or beta particles from being released from neighboring samples. Therefore, samples are formed at a high density.

On the contrary, in the claimed invention defined in amended Claims 1 and 2, since absorptive regions are formed by charging an absorptive material in a plurality of holes formed in a substrate made of a material capable of attenuating radiation energy and/or light energy, it effectively prevents radiation or light released from neighboring absorptive regions from being mired even if the absorptive regions are formed at a high density.

In any case, each of the cited references to Potter, Pham, Warner or Vuong neither discloses nor suggests the most important feature of the claimed invention defined in amended Claims 1 and 2 that absorptive regions are formed by charging an absorptive material in a plurality of holes formed in a substrate made of a material capable of attenuating radiation energy and/or light energy.

Therefore, Applicants respectfully submit that the present claims are not anticipated by Potter, Pham, Warner or Vuong and that the present claims are not obvious over the cited references. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections under both 35 U.S.C. § 102 and 35 U.S.C. § 103(a).

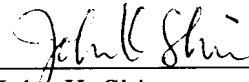
Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/918,500

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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absorptive region is not particularly limited. Illustrative examples of fiber materials preferably usable in the present invention include nylons such as nylon-6, nylon-6,6, nylon-4,10; and cellulose derivatives such as nitrocellulose, acetyl cellulose, butyric-acetyl cellulose.

5 In the present invention, the absorptive region may be formed using an oxidization process such as an electrolytic process, a plasma process, an arc discharge process and the like; a primer process using a silane coupling agent, titanium coupling agent and the like; and a surface-active agent process and the like.

10 In the present invention, in the case where a plurality of dot-like stimuable phosphor layer regions are formed in the support of the stimuable phosphor sheet, the plurality of dot-like stimuable phosphor layer regions may be formed on the surface of the support or the plurality of dot-like stimuable phosphor layer regions may be formed in a plurality of
15 holes formed dot-like in the support.

In the present invention, in the case where a plurality of dot-like stimuable phosphor layer regions are formed in the support of the stimuable phosphor sheet, the plurality of dot-like stimuable phosphor layer regions are formed in the same pattern as that of the absorptive regions
20 formed in the biochemical analysis unit.

In a preferred aspect of the present invention, a plurality of through-holes are formed dot-like in the support of the stimuable phosphor sheet and stimuable phosphor layer regions are formed in the plurality of through-holes.

25 In a further preferred aspect of the present invention, stimuable phosphor layer regions are formed by charging stimuable phosphor in the plurality of through-holes.

In another preferred aspect of the present invention, a plurality of